

### RECEIVED

MAY 0 6 2003

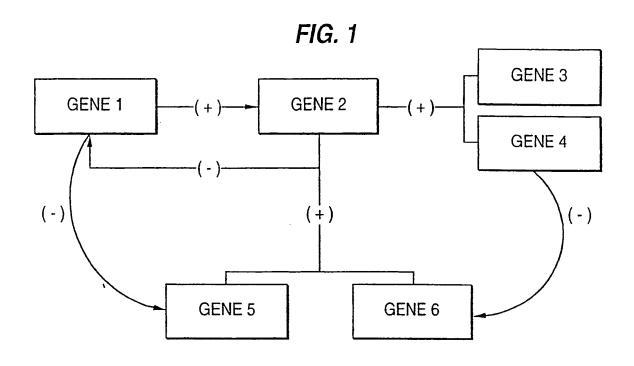
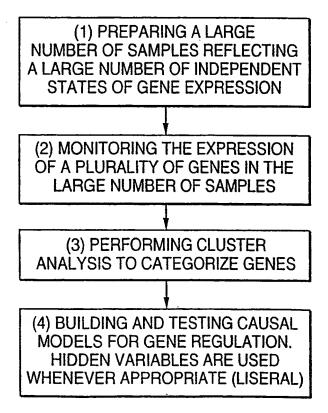


FIG. 2

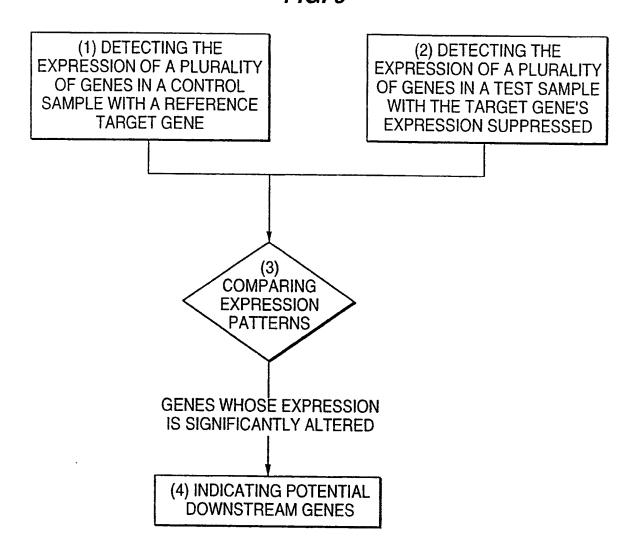




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FIG. 3

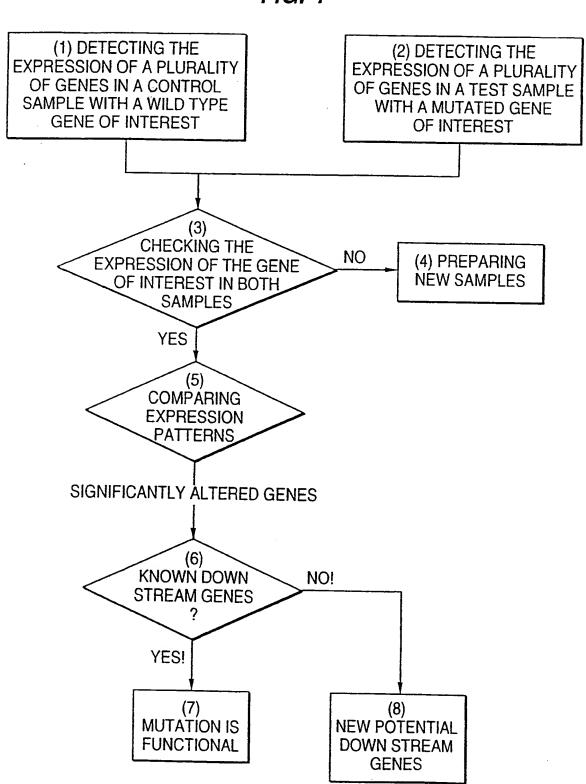




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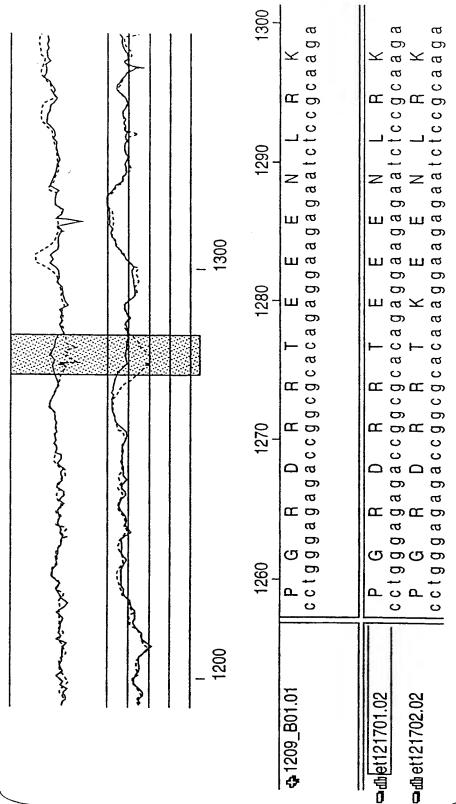
FIG. 4



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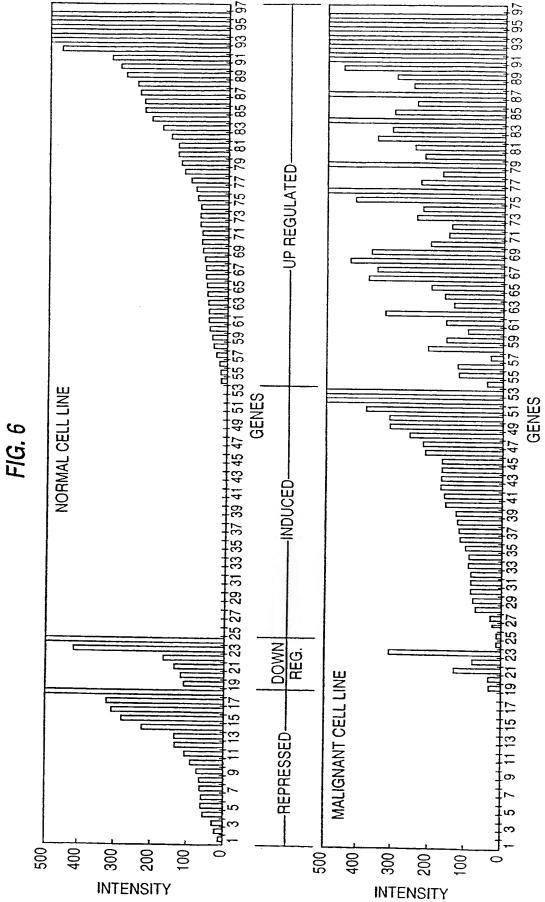
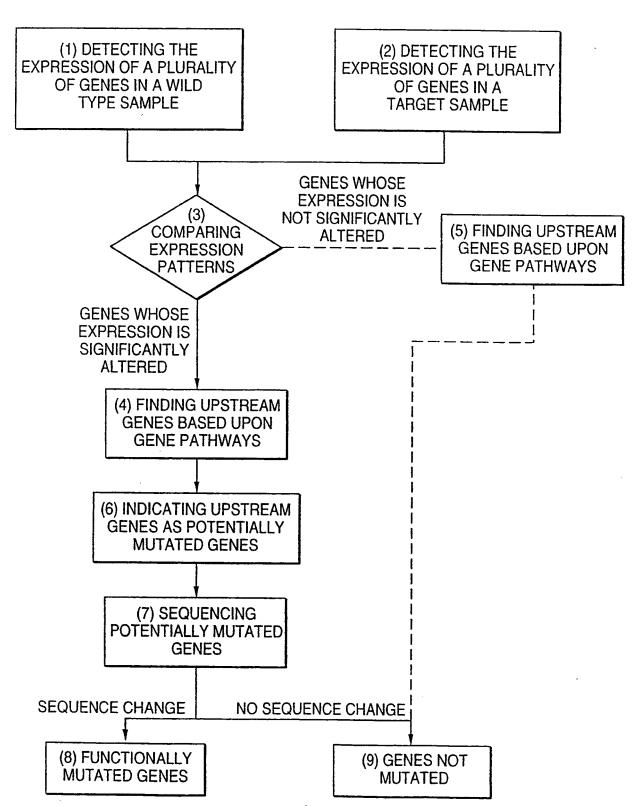




FIG. 7

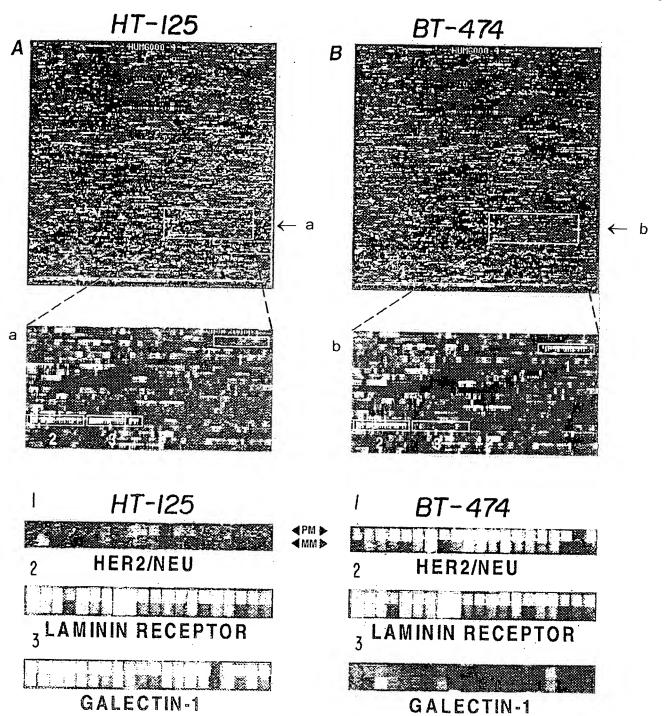




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F1G. 8



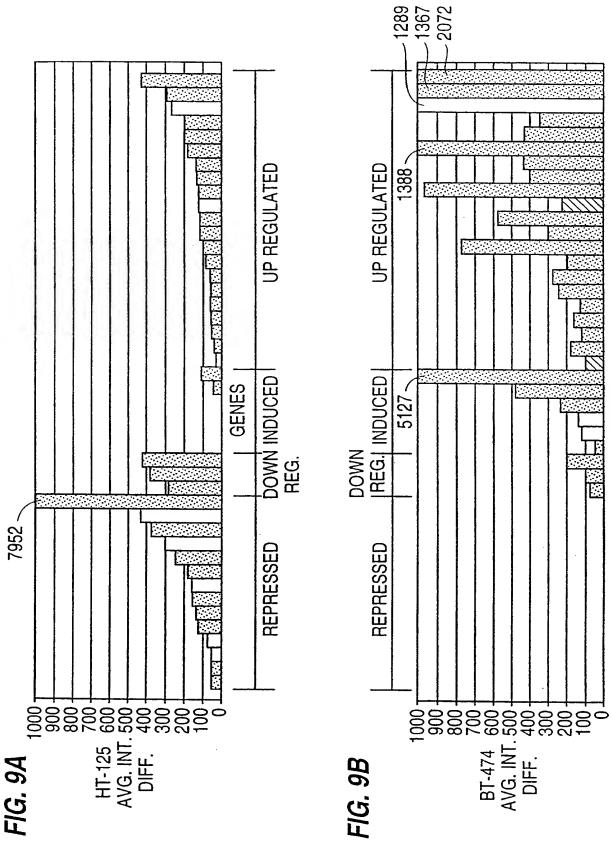
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GENES







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F1G. 104

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MAY 0 2 2003

FIG. 10B

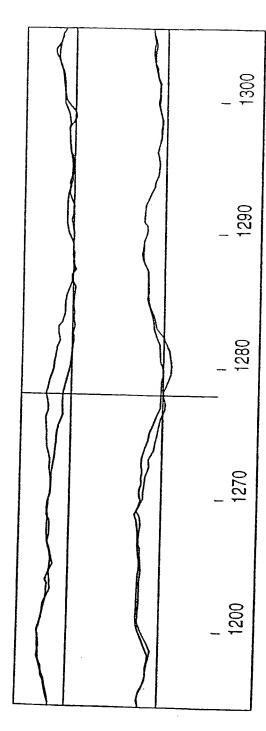


FIG. 10C

19. 10C	1260	1270	1280	1290	1300
Фp53 ref.seq	cotgggagae	D R R gaccggcgca	T E E A G G a a	9 a g a	$\times$ $^{\omega}$
<b>中心</b> wild-type.seq <b>中心</b> BT-474.seq	cotgggagag PGR cotgggagagag	D R R accggcgca D R R accggcgca	agaggaa K E aaaggaa	ENL R gagaatotoogoa ENL R gagaatotoogoa	х а х а р р а а



### FIG. 11A

### Table 3,

Genes transcriptionally induced in BT-474 vs HT-125

Accession

Nominal copy number: 500~1,000 copiecel

PS2 protein precursor X00474

Her2/neu tyrosine kinase receptor M1 1730

cDNA clone 128808 similar to Prohibitin R1 0066 Nominal copy number: 100-500 copies/cell

ranscobalamin 105068

Mitochondrial matrix protein P1 precursor M22382

DNA clone 69022 similar to Keratin, type II cytoskeletal 8 54303

.33930

DNA clone 71494 similar to Succinate dehydrogenase 51499

CDNA clone 80945 similar to NF45 **F**70062

Elongation factor 1 alpha-2 X70940

dipose specific protein luman immunophilin M88279 D45370

DNA clone 209710 similar to Matrix GLA-protein precursor H52207

ntestinal trefoil factor .08044

X Box binding protein-1 M31627

epatocyte nuclear factor-3 alpha Aldehyde dehydrogenase **J37519 J39840** 

S1/4 antigen M26481

DNA clone 46019 similar to MCM3 homolog 109351

Proliferating cell nuclear antigen 51961

DNA clone 74635 similar to Selenium-binding protein 59162

## Functional category

signal transduction other other

structural/cytoskeletal transcription factor signal transduction translational mach metabolic enz. mitochondrial other other other other

transcription factor netabolic enz. secr. gr. fact

transcription factor DNA replication other

DNA replication

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### FIG. 11B

Nominal copy number: 50-100 copinicell

cell ad./cell-cell comm. cell ad./cell-cell comm. signal transduction ranslational mach. metabolic enz. netabolic enz. netabolic enz. mitochondrial other other other other other other cDNA clone 192957 similar to Creatine kinase, ubiquitous mitochondiral precursor cDNA clone 123283 similar to Clathrin coat assembly protein AP47 cDNA clone 122341 similar to 80.7 KD alpha trans-inducing protein cDNA clone 180221 similar to Inorganic pyrophosphatase cDNA clone 149859 similar to Ribonuclease inhibitor Human epidermal growth factor receptor, HER3 cDNA clone 82030 similar to Clusterin precursor cDNA clone 195338 similar to lamin B receptor Propionyl-COA carboxylase beta chain Vonspecific crossreacting antigen Fructose-1,6-biphosphatase Cleavage stim.factor Hep27 protein E-cadherIn M34309 T67986 **U31875** Z13009 L02547 F98835 X73424 X89985 H00645 **U21931** M18216 R89566 R00451 H41017

other secr. gr. fact. transcription factor translational mach.

cDNA clone 177323 similar to Quinol oxidase polypeptide I

Nominal copy number: 10-50 copies/cell

Aryl hydrocarbon receptor nuclear translocator

M69238

X69392

H41006

X51801

Ribosomal protein L26

OP-1, osteogenic protein



cDNA clone 166353 similar to Cleavage stimulation factor, 50 KD subunit	
8	
20	
factor,	
ulation	
stim	
/age s	
lea	
0	
imilar t	-
3353 s	-
166	:
clone	
₹	_
ව්	_

FIG. 11C

cell ad./cell-cell comm.

protein process.

other other

ranslational mach.

structural/cytoskeletal

signal transduction

other

netabolic enz.

other other

eukocyte antigen related protein	cDNA clone 192943 similar to mouse Gamma-adaptin
	<b>.</b>
Y00815	H41406

HREV107-like protein. X92814

X68194

cDNA clone 30646 similar to Verprolin R42070

H19467

cDNA clone 172249 similar to Ankyrin R cDNA clone 128901 similar to Tyrosine-protein kinase CSK R10620

L-iditol-2 dehydrogenase gene 29254

amin B1

cDNA clone 40026 similar to ADP, ATP carrier protein, heart/skeletal muscle isoform cDNA clone 121357 similar to Cyclin-dependent kinase interactor 1 M34458 R53942 99996

cDNA clone 33477 similar to Phenylalkylamine binding protein R44863

GRB-7 **D43772** 

**BM28** X67334

cDNA clone 113492 similar to Translational activator GCN1 78606

KIAA0089 Human mRNA gene for Mouse glycerophosphate dehydrogenase-related **D42047** 

1GATA3 (58072 Platelet glycoprotein Ilb

cDNA clone 36517 similar to Transcriptional regulatory protein RPD3 M34344 R46731

Zinc-finger DNA binding protein R23246 133819

cDNA clone 238846 similar to Leukocyte antigen CD3 cDNA clone 571035 similar to S-100P protein cDNA clone 131094 similar to Goliath protein

H64489

cell ad /cell-cell comm ranscriptional mach. ranscription factor ranscription factor netabolic enz.

signal transduction

cell-cycle

other

ranslational mach

**JNA replication** 

cell ad./cell-cell comm.



Dna clone 44151 similar to Putative ATP-dependent RNA helicase

3-hydroxy-3-methylglutaryl coenzyme A synthase Sialyltransferase SThM X83618 **J14550** 

DNA clone 154654 similar to Galactoside 3(4)-L-fucosyltransferase R55185

C-myc V00568

47738

cDNA clone 71549 similar to Purine nucleoside phosphorylase nducible protien \_ipocortin-III M20560 47964

cDna clone 110564 similar to DNA-binding protein MEL-18 GPS1 120285

90192

Grancalcin M81637

cDna clone 508873 similar to Guanine nucleotide diss. stim. H19201

Destrogen receptor X03635

**Sytokeratin 13** X52426

cDNA clone 270833 similar to Protein phosphatase PP2A R37799

Raf oncogene X03484

ERK activator kinase, MEK1 L11284

SOX-4 X70683

cDNA clone 156489 3' similar to Choline kinase R72644

ung amiloride sensitive Na+ channel protein Adenosine receptor (A2) M97370 X76180

cDNA clone 35271 similar to NG-CAM related cell adhesion molecule R45583

M13665

Human mRNA (KIAA0039) for ORF

26018

cDna clone 203275 similar to Activator 1 37 KD subunit 154752

cDna clone 151776 similar to Developmental protein seven in absentia

ranslational mach. ranscription factor signal transduction ranscription factor metablolic enz. metabolic enz. netabolic enz. netabolic enz. other other other

structural/cytoskeletal signal transduction ranscription factor signal transduction signal transduction signal transduction ranscription factor

sell ad./cell-cell comm. sell ad./cell-cell comm. signal transduction

ranscription factor other other

signal transduction



Juman mRNA (KIAA0029) for ORF

M16768 X13956 **U07349** D00726 M54968 ERK tyrosine kinase

U21108 X52228

X13425

R52511

D31661

(-ras oncogene errochelatase

## MAY 0 6 2003 TECH CENTER 1600/2900

structural/cytoskeletal

sell-cycle

DNA clone 220505 similar to cell division protein kinase 5

Novel growth factor receptor

U30255 D11466

M64347

R43064 M60724 **J34074** H87205 X57348 807696

cDNA clone 9112 similar to H.sapiens mRNA

12 small nuclear ribonucleoprtein A'

other

ranslational mach

ranscription/replication cell ad./cell-cell comm signal transduction signal transduction signal transduction signal transduction transcription factor signal transduction signal transduction ranscription factor signal transduction ranscription factor signal transduction ranslational mach. metabolic enz. netabolic enz. metabolic enz. secr. gr. fact. mitochondrial other other other other other DNA clone 39763 similar to Gamma-interferon-inducible protein IP-30 precursor 2S RNA induced by poly(rl), poly(rC) and Newcastle disease virus cDNA clone 32974 similar to Serine/threnine-protein kinase STE20 Human T-cell receptor gamma chain VJCI-CII-CIII region Human B lymphocyte serine/threonine protein kinase 3al-beta(1-3/1-4)GlcNAc alpha-2.3-sialyltransferase -luman nuclear respiratory factor-2 subunit beta 1 or Pig N-acetylglucosaminyl-phosphatidylinositol mmediate early response protein B61 precursor Human dual specific protein phosphatase Secreted epithelial tumour mucin antigen cDNA clone 32719 similar to E2 protein Pancreatic carcinoma marker GA733-1 phosphogluconate dehydrogenase utheran blood group glycoprotein. A kinase anchor protein S-AKAP84 70 ribosomal S6 kinase alpha-1

Jeuropeptide Y receptor Y1

Androgen receptor

U13045 M20132

X83425

Juman kinase, TTK

L07615 M86699

R43936 X60787 X74570

ranscription factor ILF



# Nominal copy number: 1-10 copies/cel

Gamma-glutamylcysteine synthetase (GCS) Human mRNA for ORF (KIAA0196) M90656 H13822

cDNA clone 148291 similar to Zinc linger autosomal protein cDNA clone 235891 similar to DNA polymerase beta ranscription factor TFIID subunit TAFII28 X83928 H52655

ranscriptional mach.

metabolic enz.

other

signal transduction

other other other

**JNA replication** 

fyrosine kinase SEK receptor precursor Juman mRNA for ORF (KIAA008) R42095 D13633

Human ankyrin G **U13616** 

SIL mRNA M74558

ranscription factor TFIIE alpha X63468

cDNA clone 230127 similar to D-beta-hydroxybutyrate dehydrogenase precursor Copper transporting ATPase **Amphiregulin** M30704 U11700 H78807

380-coilin

M58411

cDNA clone 32410 similar to JNK activating kinase 1 Serine kinase, hPAK65 **J25975** R42898

/itamin D3 receptor

signal transduction signal transduction signal transduction ranslational mach. netabolic enz.

ranscriptional mach.

metabolic enz.

other



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Genes transcriptionally repressed in BT-474 vs HT-125

Nominal copy number: 500-1,000 copies/cel <u>Accession</u>

FIG. 11G

cDNA clone 175539 similar to Galectin-1 H41129

DNA clone 70133 similar to Glia derived nexin precursor

T51261

Nominal copy number: 100-500 copies/cel

Placental calcium-binding protein M77349

Transforming growth factor-beta induced gene product Clone HL 1006d similar to IGFBP3 M35878 192451

DNA clone 118219 similar to Tropomyosin

Smooth muscle protein 22-alpha M95787

Collagenase type IV mRNA, 3' end. **J03210** 

**Human lysyl oxidase** 16895

DNA clone 122884 simitar to Follistatin precursor nterferon-inducible protein 1-8D X57351 99774 **J03464** 

DNA clone 78034 similar to Metalloproteinase inhibitor 3 precursor Slone pHcol2A1 similar to Procollagen alpha 2(I)chain precursor

T61333 X78947

Connective tissue growth factor DNA clone 73802 similar to Sparc precursor

**Juman decorin** R49855 T54767 L01131

athepsin B

DNA clone 252394 similar to Protein-lysine 6-oxidase precursor L16510 H87343

**Joesin** M69066

RTVP-1 X91911

DNA clone 120085 similar to Protease do precursor 95046

oliagen VI alpha-2 C-terminal globular domain X15882 M69054

Placental cDNA coding for 5' nucleotidase (55740

DNA clone 241122 similar to Tubulin beta chain 180342

NA polymerase delta 121090

aveolin-1

Functional category

cell ad./cell-cell comm protein process

other

structural/cytoskeleta| other

cell ad./cell-cell comm ECM

structural/cytoskeleta

cell ad./cell-cell comm other

protein process. secr. gr. fact.

ECM

cell ad./cell-cell comm cell ad./cell-cell comm other

structural/cytoskeletal protein process. protein process.

structural/cytoskeletal protein process. other

structural/cytoskeletal **ONA replication** metabolic enz.

signal transduction



# Nominal copy number; 50-100 copies/cell

cDNA clone 209654 similar to Collagen alpha 3(VI) chain Human mitogen-responsive phosphoprotein hrombospondin

H62466

**U39050** 

cDNA clone 183508 similar to Peripheral myelin protein 22 cDNA clone 186308 similar to Annexin I H29761 M11718 X12369 X14787 H45474

Alpha-2 type V collagen

ropomyosin alpha chain, smooth muscle

cDNA clone 69040 similar to RAS-related protein Cathepsin X T54317

cDNA clone 140763 similar to GAP junction alpha-1 protein cDNA clone 155771 similar to Bone morphogenetic protein 1 precursor -umican U20280 H23235 R67072 R72104 **J21128** 

cDNA clone 52096 similar to APDGFR precursor

cell ad./cell-cell comm. cell ad./cell-cell comm cell ad./cell-cell comm structural/cytoskeletal structural/cytoskeletal structural/cytoskeletal signal transduction signal transduction signal transduction protein process. ECM protein process.

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structural/cytoskeletal signal transduction translational mach.

signal transduction protein process. protein process. protein process. other other

nitiation factor 5A Cadherin-11

M23419

34056

FIG. 111

Saldesmon M64110

Endoglin X72012 R70383 T69425

cDNA clone 82963 similar to Alpha-2 macroglobulin precursor cDNA clone 155241 similar to Vitellogeinin II precursor

cDNA clone 151270 similar to Cathepsin L precursor Stromelysin H02540 X05232

T54278

H80975 H06706

cDNA clone 69199 similar to Tissue inhibitor of metalloproteinases II precursor

cDNÁ clone 240954 similar to Plasma protease C1 inhibitor precursor Prolyl 4-hydroxylase alpha subunit M24486

cDNA clone 121066 similar to M-phase inducer phosphatase 3 Colony stimulating factor 1 receptor

cDNA clone 44616 similar to RAS-related protein ORAB-1

M33210

96364

signal transduction metabolic enz. signal transduction protein process. ECM





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Nominal copy number: 10-50 copies/cell

FIG. 11J

Chondroitin sulfate proteoglycan core protein

Adrenomedullin

D14874

**Autotaxin** .35594 cDNA clone 131100 similar to Preprotein translocase secy subunit R23249

Fibrillin

cDNA clone 118372 similar to CD44 antigen, epithelial form precursor 91563 L13923

Aldose reductase **J05017** 

LAMB 2) gene Laminin B2 chain M55210

Interferon-induced 17 KD protein M13755

Caveolin-2 **U32114** 

PSG9 X17097

Sphingomyelin phosphodiesterase (52679

Membrane-type matrix metalloproteinase 1 Z48481

-ysyl oxidase-like protein **J24389** 

Heparan sulfate proteoglycan M85289

Placental protein 5

--lactate dehydrogenase H chain **D29992** Y00711

Fibrinogen beta chain precursor R50499

Fibroblast activation protein U09278

H15811

cDNA clone 159533 similar to Platelet membrane glycoprotein IIB precursor X82494

Fibulin-2

H37925

**J02685** 

cDNA clone 190993 similar to Interferon-activatable protein 204 Plasminogen activator inhibitor-2

Wild-type p53 activated fragment-1, p21WAF1/CIP1

U03106 D13665 T55741

cDNA clone 73645 similar to Myosin light chain kinase Osteoblast specific factor 2

Pregnancy-specific beta 1-glycoprotein 7 **U18467** 

Pro-alpha1 (III) collagen X06700

cDNA clone 231424 similar to Glutathione S-transferase P H56627

cDNA clone 62328 similar to Laminin gamma-1 chain precursor 41199

cDNA clone 76290 similar to Ubiquitin carboxyl-terjminal hydrolase isozyme L1 59895

T68426

cDNA clone 70213 similar to Alpha-1-antiproteinase F precursor

cell ad./cell-cell comm. cell ad./cell-cell comm. cell ad./cell-cell comm. cell ad./cell-cell comm. sell ad./cell-cell comm. cell ad./cell-cell comm. cell ad./cell-cell comm cell ad./cell-cell comm. sell ad./cell-cell comm. signal transduction signal transduction signal transduction ranscription factor. protein process. protein process. protein process protein process. cell-cycle other other other other ECM ECM other other other ECM other ECM other ECM ECM



### TECH CENTER 1600/2900

cell ad./cell-cell comm

other

cell ad./cell-cell comm

ranscription factor protein process.

other other

transcription factor secr. gr. fact.

cell ad./cell-cell comm

other

ECM

signal transduction signal transduction signal transduction protein process. secr. gr. fact. secr. gr. fact cell-cycle other

Hematopoetic proteoglycan core protein

cDNA clone 220183 similar to EBNA-2 nuclear protein H85111

Pentaxin X63613

cDNA clone 136821 similar to Transforming growth factor beta 1 precursor ranscriptional regulator ISGF3 gamma subunit

M87503

issue type plasminogen activator Brain-derived neurotrophic factor X13097

-luman glutathione transferase M2 Ipha-1 type XVI collagen

AHC class I HLA-J

-atent TGF-beta binding protein Human mRNA for BST-2 237976

DNA clone 66508 3' similar to Nuclear factor 1 clone PNF1/X nterferon-induced protein 6-16 precursor X02492 **166960** 

(eratinocyte growth factor precursor nterleukin 6 H88938

Collagenase 96shc M29150 X05231 X68148

(IAA0057 for ORF D31762 T61090

cDNA clone 83635 similar to Endoglin precursor T53889

DNA clone 78017 similar to Complement C1R component precursor nR-PTPu gene for protein tyrosine phosphatase X58288

cDNA clone 72466 similar to Alpha crystallin B chain T51913 X17042

N-acetylglucosaminyltransferase M55621

nterferon-induced 56 KD protein M24594 **R36467** 

M63509 M92642 (60201



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DNA clone 76721 similar to Calcineurin B subunit isoform 1

X16707

DNA 203126 similar to Metallothionein-II:

linesin light chain H54425 L04733

DNA clone 36200 similar to Tissue factor precursor R46493

nterleukin-7 receptor alpha chain precursor M29696

DNA clone 121916 similar to Calponin H2, smooth muscle

197948

DNA clone 33191 similar to Opioid binding protein R43953

cDNA clone 129622 similar to Tissue factor pathway inhibitor

Smooth muscle cell calponin **U37019** R16659

Gravin M96322

DNA clone 113518 similar to Carbonyl reductase

**3ADD45** M60974 X60708 78624

CHDP7

hrombin receptor precursor M62424

DNA clone 197667 similar to STAT2 R94513

**ILA-DR** alpha V00523 H65605

DNA clone 209780 similar to Prothrombin precursor X76488

ysosomal acid lipase

DNA clone 129303 similar to Complement factor H-like protein 1 precursor

leme oxygenase R12676 X06985

R60908

**J25779** 

DNA clone 42188 similar to protein-tyrosine kinase

luman chromosome 17q21 mRNA clone 694:2

inythrocyte membrane sialoglycoprotein beta

DNA clone 110162 similar to RAS-related C3 Botulinum toxin substrate 2

structural/cytoskeletal signal transduction ranscription factor

structural/cytoskeletal signal transduction

cell ad./cell-cell comm cell ad./cell-cell comm cell ad./cell-cell comm structural/cytoskeletal

cell-cycle other

signal transduction signal transduction protein process

signal transduction protein process. other

metabolic enz. other

signal transduction

signal transduction other



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등훈등	NA clone 40303 similar to Shc transforming protein 46.8 KD and 51.7 KD precursor signal transduction neobox protein  NA clone 199264 similar to LTR5 Retrovirus-related ENV polyprotein	sor signal transduction transcription factor other
cDNA 114641 simila cDNA clone 153769	114641 similar to Collagen alpha 3(VI) chain clone 153769 similar to RAS-related protein RHA1	ECM signal transduction
Two-handed zinc fing	anded zinc finger protein ZEB	transcription factor
cDNA clone 201757 si	cDNA clone 201757 similar to DNA-directed RNA pol I largest subunit	transcription mach.
cDNA clone 80145 simi	lar to Proteolipid protein PPA1	protein process.
cDNA clone 232946 sin	clone 232946 similar to Serine/threonine-protein kinase SGK	signal transduction
PTS system, sucrose-s	pec. IIABC component	other
Complement componer	at Olir	other
OSF-1		secr. gr. tact.
Human mRNA for beta-	glucocorticoid receptor	signal transduction
cDNA clone 135146 sim	ilar to Glucose transporter type 3	other
Nuclear autoantigen SP.	100	other
Human helix-loop-helix t	pasic phosphoprotein	other
Human interferon gamn	na treatment inducible mRNA.	other
Interferon-gamma induc	ed protein	other
Testican		cell ad./cell-cell comm.
Serum protein MSE55		other
cDNA clone 67233 simila	ar to Protein-tyrosine phosphatase 1B	protein process.
Glioma pathogenesis-re	lated protein	other
cDNA clone 137079 sim	ilar to CD30 ligand	signal transduction
HOX2H		transcription factor
cDNA clone 30543 simila	ar to Antigen peptide transporter 1	protein process
Human microfibril-assoc	iated glycoprotein	ECM
cDNA clone 111345 sin	ilar to SRC substrate P80/85 proteins	signal transduction
Cyclin G		cell-cycle
Bax		cell-cycle

Message quantities are expressed as nominal copy number per cell relative to hybridization intensities of known copy number spiked controls. Abbreviations: secr. gr. fact., secreted growth factor; ad., adhesion; comm., communication; mach., machinery; enz., enzyme; pross., processing; ECM, extracellular matrix.